

Serial No. 10/026206

- 2 -

Art Unit: 2171

comparing said ~~another~~ second checksum to said first checksum to determine if there is a match, whereby a match indicates a probability that the data stream includes content of the type associated with the character pattern.

2. (original) The method according to claim 1 further comprising shifting said portion of said data stream into a shift register.

3. (currently amended) The method according to claim 1 further comprising: shifting more data from said data stream into said shift register if said comparison does not result in a match; and recomputing said ~~another~~ second checksum by removing an oldest unit of data from said ~~another~~ checksum recomputation and adding said more data to said recomputation.

4. (original) The method according to claim 3 further comprising: continuing said shifting and said recomputing until said comparison results in a match.

5. (currently amended) The method according to claim 1 further comprising: shifting multiple portions of said data stream into said a shift register.

6. (currently amended) The method according to claim 5 further comprising computing a plurality of ~~another~~ second checksums based upon different parts of said multiple portions of said data stream.

7. (currently amended) The method according to claim 6 wherein said character pattern includes a

Serial No. 10/026206

- 3 -

Art Unit: 2171

plurality of character sub-patterns and said checksum comprises a plurality of sub-checksums; said method further comprising simultaneously comparing said plurality of ~~another~~ second checksums to at least two of said plurality of sub-checksums to determine if there are any matches.

8. (currently amended) The method according to claim 7 wherein at least two of said plurality of sub-checksums have different lengths.

9. (currently amended) The method according to claim 1 wherein said character pattern includes a plurality of character sub-patterns and said checksum comprises a plurality of sub-checksums; said method further comprising simultaneously comparing said ~~another~~ second checksum to at least two of said plurality of sub-checksums to determine if there are any matches.

10. (currently amended) The method according to claim 1 wherein said character pattern includes a plurality of character sub-patterns and said checksum comprises a plurality of sub-checksums; said method further comprising comparing said ~~another~~ second checksum to one of said plurality of sub-checksums to determine if there is a match; recomputing said ~~another~~ second checksum based upon a longer portion of said data stream; and comparing said recomputed ~~another~~ second checksum to at least another of said plurality of sub-checksums.

11. (currently amended) The method according to claim 1 wherein said portion of said data stream ~~include~~ includes a byte of data.

12. (currently amended) The method according to claim 1 wherein said portion of said data stream

Serial No. 10/026206

- 4 -

Art Unit: 2171

~~include~~ includes a plurality of bytes of data.

13. (currently amended) Apparatus that identifies content type by executing searches for a character pattern associated with the content type within a data stream comprising:

a register;

a processor for copying a predetermined portion of said data stream into said register;

a checksum generator configured to compute a first checksum for said character pattern and ~~another~~ a second checksum for said predetermined portion; and

at least one comparator configured to compare said ~~another~~ second checksum to said first checksum, whereby a match indicates a probability that the data stream includes content of the type associated with the character pattern.

14. (currently amended) The apparatus according to claim 13 wherein said register further includes a plurality of sub-registers.

15. (original) The apparatus according to claim 13 wherein said predetermined portion of said data stream is a byte of data.

16. (original) The apparatus according to claim 13 wherein said predetermined portion of said data stream is a plurality of bytes of data.

17. (currently amended) The apparatus according to claim 13 wherein said checksum generator is configured to respectively compute a plurality of first checksums for a plurality of character

Serial No. 10/026206

- 5 -

Art Unit: 2171

patterns and to compute ~~another~~ the second checksum for said predetermined portion; and, wherein said at least one comparator includes a plurality of sub-comparators each configured to respectively compare said ~~another~~ second checksum to different ones of said plurality of first checksums.

18. (currently amended) The apparatus according to claim 17 wherein at least two of said plurality of first checksums have different lengths.

19. (currently amended) The apparatus according to claim 17 wherein said checksum generator comprises a plurality of checksum sub-generators.

20. (currently amended) The apparatus according to claim 13 wherein said processor is configured to shift more data from said data stream into said register if said comparator does not detect a match; and, said checksum generator is configured to recompute said ~~another~~ second checksum by removing an oldest unit of data from said ~~another~~ second checksum recomputation and adding said more data to said recomputation.

21. (currently amended) A method of searching for a character pattern within a data stream to identify a type of content carried by the data stream comprising:

computing a first checksum for said character pattern, wherein said character pattern has a length;

shifting a byte of data from said data stream into a register;

computing ~~another~~ a second checksum for said byte of said data stream;

Serial No. 10/026206

- 6 -

Art Unit: 2171

continuing said shifting and computing of ~~another~~ the second checksum until a length of said shifted bytes of data is equal to said length of said character pattern;

comparing said ~~another~~ second checksum to said first checksum to determine if a match exists;

shifting another byte of data from said data stream into said register if said comparison does not result in a match; and

recomputing said ~~another~~ second checksum by removing an oldest byte of data from said ~~another~~ second checksum recomputation and adding said another byte of data to said recomputation;

comparing said recomputed checksum to said checksum to determine if a match exist; and,

continuing said shifting another byte, said recomputing, and said comparing until a match exists, whereby a match indicates a probability that the data stream includes content of the type associated with the character pattern.

22. (currently amended) Apparatus that searches for a character pattern within a data stream to identify a type of content carried by the data stream comprising:

register means for temporarily storing a portion of said data stream;

processor means, electrically coupled to said register means, for copying said portion of said data stream into said register means;

checksum generator means for computing a first checksum for said character pattern and for computing ~~another~~ a second checksum for said portion of said data stream; and,

comparison means coupled to said checksum generator means for comparing said ~~another~~ second checksum to said first checksum to determine if a match exists, whereby a match indicates

Serial No. 10/026206

- 7 -

Art Unit: 2171

a probability that the data stream includes content of the type associated with the character pattern